

and Sahi (1996) the male attains maturity at the size of CL > 6.0 cm, which supports the present study.

The maturity in turtles is related either to age or size, and requires more study.

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## 21. RECORDS OF THE GHARIAL *GAVIALIS GANGETICUS* (GMELIN) FROM THE BARAK RIVER SYSTEM OF NORTH-EASTERN INDIA

(With one text-figure)

The Barak river and its tributaries drain the southern areas of north-eastern India, notably parts of Nagaland, Manipur, Mizoram, Tripura and the entire southern Assam (Fig. 1). The main tributaries of the Barak are the Irang, Makru, Tipai (Tuivai), Jiri, Chiri, Madhura, Jatinga, Sonai, Dhaleswari (Tlawng) with its distributary, the Katakhal, Shingla and the Longai. Near Badarpur, the river bifurcates into two - the Surma and the Kushiya and then flows through Bangladesh.

Occurrence of the gharial in the Barak river system was not reported in any of the recent publications on the species (Whitaker and Basu 1982; Singh, Kar and Choudhury 1984; Singh 1991). Smith (1931) also did not mention specifically. However, Choudhury (1989, 1992) mentioned its recent reports from a tributary of the Barak river.

An excellent account of the past abundance of the gharial in the Barak river system is found in Cooper (1951a, b). His Tepi', Macrup and Irung are now known as Tipai (Tuivai), Makru and Irang respectively, all tributaries of the Barak river. He and his companions shot a few of these reptiles in the upper reaches of the Barak and in the Tipai rivers. The first one was shot in 1906 up the Tipai river. In the twenties, he found the gharial to be "fairly

plentiful" in the upper reaches of the Barak, especially near its confluence with the Tipai. The site of confluence is known as Tipaimukh. The river Tipai marks the boundary of the present day Manipur and Mizoram states.

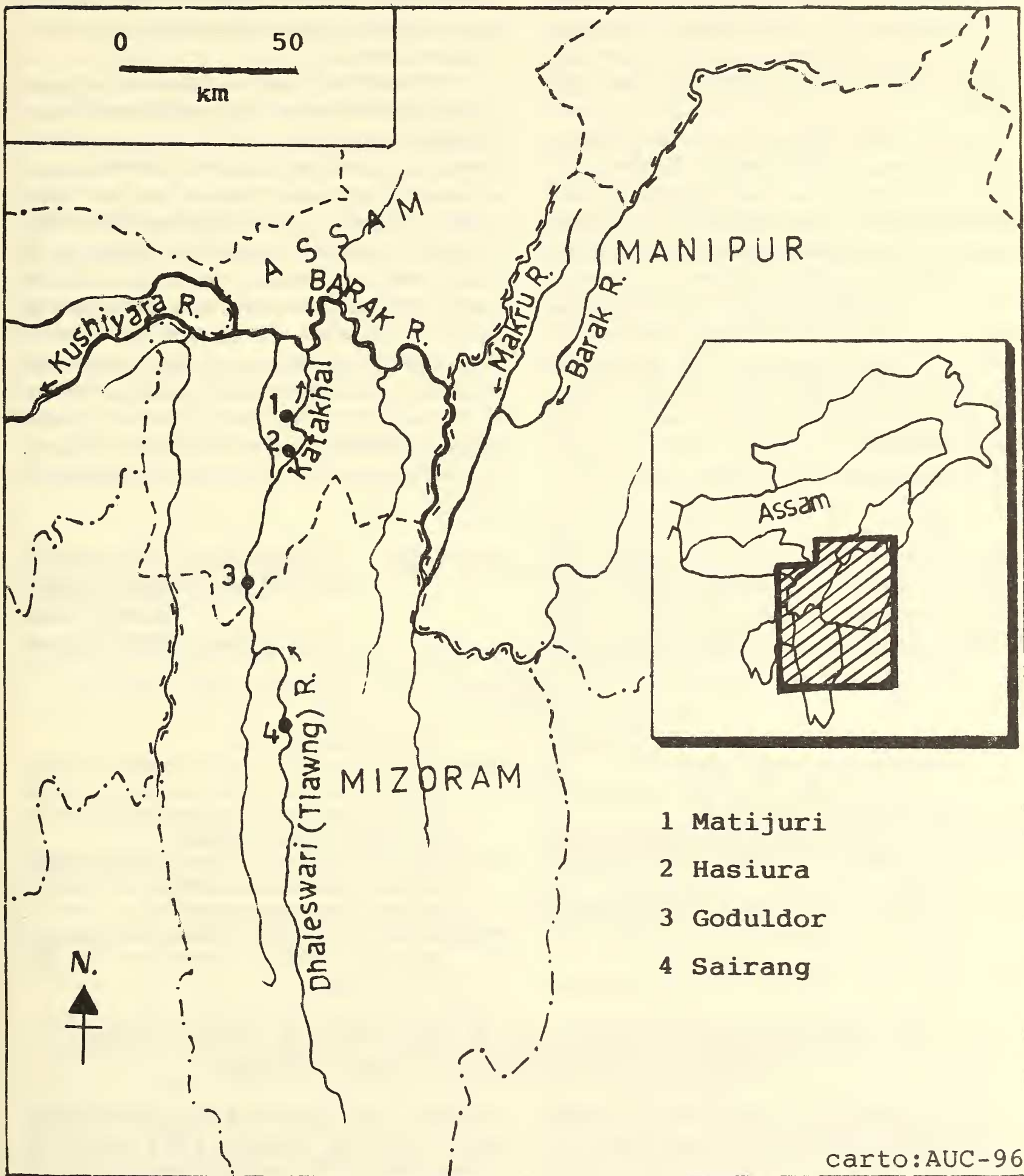
Although Singh (1991) mentioned the reference of Cooper (1951a, b), he mistook the Barak river system to be that of the Brahmaputra and also did not mark it on the map.

During field survey in different parts of the river basin over the past decade, I came across a few authentic reports on the species, and also visited all the recorded localities. These reports are presented chronologically.

1934-35: One gharial seen in broad daylight in Katakhal river, a tributary of the Barak river, near Matijuri in Hailakandi district, Assam. It was a large specimen, 4-5 m long (A. Mazid Choudhury, pers. comm.).

1948: One recorded in the Kushiya river, Karimganj district, Assam. The Kushiya river also marks the Indo-Bangladesh international border.

1950: One killed in the Dhaleswari river near Hartaki, about 32 km downstream of Sairang in Mizoram. The river is locally called by the Mizos as Tlawng.



carto:AUC-96

Fig. 1. Map showing the Barak River system and the rivers and places mentioned in the text.

1954-55: One seen floating in the Katakhal river near Hasiura, Hailakandi district. It was shot with a gun but could not be killed. It was a large specimen, 4-5 m long (A. Mazid Choudhury, pers. comm.).

Early 1960s: One shot by a 'white' hunter in the Dhaleswari river, south of Gharmura in Hailakandi district. After that killing, the place is called Goduldor (Godul= Gharial in local Bengali dialect) and is inside the Innerline Reserve Forest.

1988: During a short field survey in Manipur, I came across reports of stray, or rather, remnant individuals of gharial from the upper reaches of the Barak river and its tributary, the Makru river (Choudhury 1989, 1992). I cross checked with the Forest Department who were also aware of these facts. Unfortunately, no survey could be carried out due to insurgent activities in the area. Cooper (1951a, b) did not cover these stretches of the rivers either.

1996: In January, I visited some sites in the upper reaches of the Barak and its tributaries, the Makru and the Irang in Tamenglong district of Manipur. Although no gharial could be seen, the long deep pools with sand banks showed potential habitat

for the reptile. This time again some of the stretches, farther interior, could not be surveyed due to insurgent activities.

Although the gharial was present in the Barak river system, it was never common in the recent past. The main reasons for its decline in the area are (1) Heavy year-round use of the rivers for fishing and as waterway to transport bamboo and other forest produce; (2) Encroachment of basking and breeding beaches (occupied by humans for setting up of fishing camps, logging camp and bamboo-collection camp); (3) Chasing and attempt to kill any gharial sighted; (4) Siltation of river-beds due to heavy deforestation in the hills; and (5) Use of poison and dynamite for fishing by tribals in the upper reaches of the rivers. While there are possibilities of a few gharials still living in the upper reaches of the Barak and the Dhaleswari rivers, they are unlikely to survive for long.

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## 22. AN OBSERVATION ON ECDYSIS IN THE COMMON HOUSE LIZARD *HEMIDACTYLUS FLAVIVIRIDIS* RUPELL OF INDIA

During the last part of March 1996, I collected a copulating pair of the common house lizard, from the outside wall of a verandah at Kolasib of Mizoram, India at 0755 hrs. The outside atmospheric temperature was measured and was

found to be 16°C, there was a heavy shower during the preceding night. Kolasib is a hilly terrain at an altitude 1067 m. The lizard pair was caught and kept in a 250 ml borosil glass beaker with a paper lid having some pores for ventilation. The pair was